

Appl. No. 10/615,433  
Amdt. Dated 01/16/2006  
Reply to Office Action of 08/16/2005

IN THE CLAIMS

Please cancel claims 4, 10, 15, 39, and 48-51 without prejudice.

Please amend claims 1, 6-9, 11-14, 19, 21-22, 30-31, 35, 40-43, and 46 as follows below.

Please add new claims 52-61 as follows below.

MARKED-UP CLAIMS

1           1. (Currently Amended) A light comprising:  
2                 a circuit board including one or more light  
3                 emitting diodes (LEDs) to generate photons, each of the  
4                 one or more light emitting diodes (LEDs) having an  
5                 optical axis;  
6                 a rotatable acrylic rod having a first end,  
7                 [[and]] a second end, a central optical axis, and a  
8                 reflective strip along a substantial length thereof,  
9                 the reflective strip to reflect photons outwards  
10                through the rotatable acrylic rod towards a direction  
11                ~~the rotatable acrylic rod to rotate to change a~~  
12                ~~direction of radiation of light; a first circuit board~~  
13                ~~including one or more light emitting diodes (LEDs) to~~  
14                ~~generate photons, an optical axis of each of the one or~~  
15                ~~more light emitting diodes (LEDs) substantially in~~  
16                ~~parallel with a central optical axis of the rotatable~~  
17                ~~acrylic rod; and~~  
18                a first end housing having a ~~first~~ an opening  
19                through which the first end of the rotatable acrylic  
20                rod is inserted, the rotatable acrylic rod being  
21                rotatable within the opening of the ~~first end~~ housing

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22        to change the direction of the reflected photons, the  
23        ~~first end~~ housing to house the [[first]] circuit board  
24        and align the one or more light emitting diodes (LEDs)  
25        of the [[first]] circuit board with the [[first]]  
26        opening and the first end of the rotatable acrylic rod  
27        such that the optical axis of each of the one or more  
28        light emitting diodes (LEDs) is substantially in  
29        parallel with the central optical axis of the rotatable  
30        acrylic rod.

1           2. (Previously Presented)        The light of claim 1,  
2        wherein  
3           the rotatable acrylic rod is clear.

1           3. (Previously Presented)        The light of claim 1,  
2        wherein  
3           the rotatable acrylic rod is cylindrical.

1           4. (Cancelled)        The light of claim 1, further  
2        comprising:  
3           a second circuit board including one or more light  
4           emitting diodes (LEDs) to generate photons; and  
5           a second end housing having a second opening  
6           through which the second end of the rotatable acrylic  
7           rod is inserted, the second end housing to house the  
8           second circuit board and align the one or more light  
9           emitting diodes (LEDs) of the second circuit board with  
10          the second opening and the second end of the rotatable  
11          acrylic rod.

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1           5. (Cancelled)

1           6. (Currently Amended)   The light of claim 1, wherein  
2           the one or more light emitting diodes (LEDs) emit an  
3           incoherent light ~~for dispersion out of~~ out into the  
4           rotatable acrylic rod.

1           7. (Currently Amended)   A ~~[[The]]~~ light ~~of claim 1,~~  
2           comprising:

3                 a first circuit board including one or more light  
4                 emitting diodes (LEDs) to generate photons, each of the  
5                 one or more light emitting diodes (LEDs) having an  
6                 optical axis;

7                 an acrylic rod having a first end, a second end,  
8                 and a central optical axis;

9                 a first end housing having a first opening through  
10                which the first end of the acrylic rod is inserted, the  
11                first end housing to house the first circuit board and  
12                align the one or more light emitting diodes (LEDs) of  
13                the first circuit board with the first opening and the  
14                first end of the acrylic rod such that the optical axis  
15                of each of the one or more light emitting diodes (LEDs)  
16                of the first circuit board is substantially in parallel  
17                with the central optical axis of the acrylic rod; and

18                wherein the length of the ~~rotatable~~ acrylic rod is  
19                proportional to a desired wavelength of light.

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1           8. (Currently Amended)    A [[The]] light of claim 1,  
2 wherein comprising:  
3               a first circuit board including one or more light  
4               emitting diodes (LEDs) to generate photons, each of the  
5               one or more light emitting diodes (LEDs) having an  
6               optical axis;  
7               an acrylic rod having a first end, a second end,  
8               and a central optical axis;  
9               a first end housing having a first opening through  
10              which the first end of the acrylic rod is inserted, the  
11              first end housing to house the first circuit board and  
12              align the one or more light emitting diodes (LEDs) of  
13              the first circuit board with the first opening and the  
14              first end of the acrylic rod such that the optical axis  
15              of each of the one or more light emitting diodes (LEDs)  
16              of the first circuit board is substantially in parallel  
17              with the central optical axis of the acrylic rod; and  
18              wherein the diameter of the rotatable acrylic rod  
19              is proportional to a desired wavelength of light.

1           9. (Currently Amended)    The light of claim 1, further  
2 comprising:  
3               a [[first]] reflector coupled to the first circuit  
4               board around the one or more light emitting diodes (LEDs) at  
5               a first end, a second end of the [[first]] reflector aligned  
6               with the first opening and receiving the first end of the  
7               rotatable acrylic rod, the [[first]] reflector to reflect  
8               photons into the rotatable acrylic rod.

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1           10. (Cancelled)       The light of claim 1, further  
2 comprising:  
3           a reflective strip coupled down the length of the  
4 rotatable acrylic rod to reflect photons out of the  
5 rotatable acrylic rod.

1           11. (Currently Amended)   The light of claim [[10]] 1,  
2 wherein  
3           the rotatable acrylic rod is a circular cylinder having  
4 a circumference, and  
5           along the length of the rotatable acrylic rod, the  
6 reflective strip encompasses a portion of the circumference  
7 ~~one hundred eight degrees of a diameter of a circular~~  
8 ~~cylindrical cross-section~~ of the rotatable acrylic rod over  
9 a range from forty five degrees to one hundred eight degrees  
10 inclusively.

1           12. (Currently Amended)   The light of claim [[10]] 1,  
2 wherein  
3           the rotatable acrylic rod is a circular cylinder having  
4 a circumference, and  
5           along the length of the rotatable acrylic rod, the  
6 reflective strip encompasses ninety degrees of the  
7 circumference ~~a diameter of a circular cylindrical cross-~~  
8 ~~section~~ of the rotatable acrylic rod.

1           13. (Currently Amended)   The light of claim [[10]] 1,  
2 wherein

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3        the rotatable acrylic rod is a circular cylinder having  
4        a circumference, and  
5        along the length of the rotatable acrylic rod, the  
6        reflective strip encompasses forty five degrees of the  
7        circumference ~~a diameter of a circular cylindrical cross-~~  
8        ~~section~~ of the rotatable acrylic rod.

1        14. (Currently Amended) The light of claim 1, wherein  
2        the photons are coupled into the rotatable acrylic rod  
3        and ~~radiated~~ reflected outward therefrom without the use of  
4        a fragile glass bulb or filament.

1        15. (Cancelled) The light of claim 1, wherein  
2        the light is mounted to a rack to light rack mounted  
3        equipment.

1        16. (Original) The light of claim 1, wherein  
2        the light is a light fixture to mount to a surface to  
3        illuminate an area.

1        17. (Previously Presented) The light of claim 1,  
2        further comprising:  
3                an electrical-to-optical controller coupled to the  
4                first circuit board to control the one or more light  
5                emitting diodes (LEDs); and  
6                an on/off switch to switch the generation of  
7                photons by the one or more light emitting diodes (LEDs)  
8                on and off.

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1           18. (Original) The light of claim 17, further  
2 comprising:  
3           an intensity selection switch to vary the  
4 brightness of the generated light.

1           19. (Currently Amended) The light of claim 17, wherein  
2 ~~further comprising:~~  
3           the one or more light emitting diodes (LEDs) are a  
4 plurality of light emitting diodes (LEDs) each to  
5 generate a different color of light, and  
6 the light further includes  
7 a color selection switch to selectively choose a  
8 mixture of primary colors generated by the ~~one or more~~  
9 plurality of light emitting diodes (LEDs) to vary the  
10 color of the generated light.

1           20. (Previously Presented) The light of claim 1,  
2 further comprising:  
3           a transformer to transform AC power to a safe  
4 efficient power to power the one or more light emitting  
5 diodes (LEDs) of the first circuit board in an  
6 efficient manner.

1           21. (Currently Amended) A method of lighting without a  
2 light bulb, the method comprising:  
3           generating first photons of a first desired color;  
4           coupling the first photons into a first end of a  
5 rotatable acrylic rod;

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6        reflecting ~~radiating~~ the first photons out of the  
7        rotatable acrylic rod as light in a first direction; and  
8        rotating the rotatable acrylic rod to reflect ~~radiate~~  
9        the first photons in a second direction different from the  
10       first direction.

1        22. (Currently Amended)    The method of claim 21,  
2        further comprising:  
3        generating second photons of the first desired color;  
4        coupling the second photons into a second end of the  
5        rotatable acrylic rod; and  
6        reflecting ~~radiating~~ the second photons out of the  
7        rotatable acrylic rod as light in the first direction or the  
8        second direction.

1        23. (Previously Presented)    The method of claim 21,  
2        further comprising:  
3        varying a mixture of the first photons to change the  
4        first desired color to a second desired color differing from  
5        the first desired color.

1        24. (Previously Presented)    The method of claim 21,  
2        further comprising:  
3        uniformly varying the mixture of the first photons  
4        generated and coupled into the rotatable acrylic rod to vary  
5        the intensity of the light.

1        25. (Previously Presented)    The method of claim 21,  
2        wherein,



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3 the rotatable acrylic rod is cylindrically shaped.

1 26. (Previously Presented) The method of claim 21,  
2 wherein,  
3 the rotatable acrylic rod is clear.

1 27-29. (Cancelled)

1 30. (Currently Amended) The method of claim 22,  
2 wherein  
3 the rotating of the rotatable acrylic rod to reflect  
4 ~~radiate~~ both the first photons and the second photons in the  
5 second direction different from the first direction.

1 31. (Currently Amended) A light ~~to mount to an~~  
2 ~~equipment rack to provide equipment lighting, the light~~  
3 comprising:  
4 a first circuit board including one or more light  
5 emitting diodes (LEDs) to generate photons, each of the  
6 one or more light emitting diodes (LEDs) having an  
7 optical axis;  
8 a second circuit board including one or more light  
9 emitting diodes (LEDs) to generate photons, each of the  
10 one or more light emitting diodes (LEDs) having an  
11 optical axis;  
12 a rotatable acrylic rod having a first end,  
13 [[and]] a second end, a central optical axis, and a  
14 reflective strip along a substantial length thereof,  
15 the reflective strip to reflect photons outwards

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16 through the rotatable acrylic rod towards a direction  
17 ~~the rotatable acrylic rod to rotate to change a~~  
18 ~~direction of radiation of light; a first circuit board~~  
19 ~~including one or more light emitting diodes (LEDs) to~~  
20 ~~generate photons, an optical axis of each of the one or~~  
21 ~~more light emitting diodes (LEDs) substantially in~~  
22 ~~parallel with a central optical axis of the rotatable~~  
23 ~~acrylic rod at the first end;~~

24 a first end housing having a first opening through  
25 which the first end of the rotatable acrylic rod is  
26 inserted, the first end housing to house the first  
27 circuit board and align the one or more light emitting  
28 diodes (LEDs) of the first circuit board with the first  
29 opening and the first end of the rotatable acrylic rod  
30 such that the optical axis of each of the one or more  
31 light emitting diodes (LEDs) of the first circuit board  
32 is substantially in parallel with the central optical  
33 axis of the rotatable acrylic rod;

34 ~~a second circuit board including one or more light~~  
35 ~~emitting diodes (LEDs) to generate photons, an optical~~  
36 ~~axis of each of the one or more light emitting diodes~~  
37 ~~(LEDs) substantially in parallel with the central~~  
38 ~~optical axis of the rotatable acrylic rod at the second~~  
39 ~~end; and~~

40 a second end housing having a second opening  
41 through which the second end of the rotatable acrylic  
42 rod is inserted, the second end housing to house the  
43 second circuit board and align the one or more light  
44 emitting diodes (LEDs) of the second circuit board with

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45       the second opening and the second end of the rotatable  
46       acrylic rod such that the optical axis of each of the  
47       one or more light emitting diodes (LEDs) of the second  
48       circuit board is substantially in parallel with the  
49       central optical axis of the rotatable acrylic rod; and  
50       wherein the rotatable acrylic rod being rotatable  
51       within the first and second openings of the respective  
52       first and second end housings to change the direction  
53       of the reflected photons.

1       32. (Previously Presented)       The light of claim 31,  
2       wherein  
3       the rotatable acrylic rod is clear.

1       33. (Previously Presented)       The light of claim 31,  
2       wherein  
3       the rotatable acrylic rod is cylindrical.

1       34. (Cancelled)

1       35. (Currently Amended)       The light of claim 31, wherein  
2       the one or more light emitting diodes (LEDs) emit an  
3       incoherent light ~~for dispersion out of~~ out into the  
4       rotatable acrylic rod.

1       36. (Previously Presented)       The light of claim 31,  
2       wherein  
3       a length of the rotatable acrylic rod is proportional  
4       to a desired wavelength of light.

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1           37. (Previously Presented)       The light of claim 31,  
2 wherein  
3           a diameter of the rotatable acrylic rod is proportional  
4 to a desired wavelength of light.

1           38. (Previously Presented)       The light of claim 31,  
2 further comprising:  
3           a first reflector coupled to the first circuit board  
4 around the one or more light emitting diodes (LEDs) at a  
5 first end, a second end of the first reflector aligned with  
6 the first opening and receiving the first end of the  
7 rotatable acrylic rod, the first reflector to reflect  
8 photons into the rotatable acrylic rod;  
9           a second reflector coupled to the second circuit board  
10 around the one or more light emitting diodes (LEDs) at a  
11 second end, a second end of the first reflector aligned with  
12 the second opening and receiving the second end of the  
13 rotatable acrylic rod, the second reflector to reflect  
14 photons into the rotatable acrylic rod.

1           39. (Cancelled)           The light of claim 31, further  
2 comprising:  
3           a reflective strip coupled down the length of the  
4 rotatable acrylic rod to reflect photons out of the  
5 rotatable acrylic rod.

1           40. (Currently Amended)   The light of claim 31 [[39]],  
2 wherein

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3        the rotatable acrylic rod is a circular cylinder having  
4        a circumference, and  
5        along the length of the rotatable acrylic rod, the  
6        reflective strip encompasses a portion of the circumference  
7        one hundred eight degrees of a diameter of a circular  
8        eylindrical cross-section of the rotatable acrylic rod over  
9        a range from forty five degrees to one hundred eight degrees  
10       inclusively.

1        41. (Currently Amended) The light of claim 31 [[39]],  
2        wherein  
3        the rotatable acrylic rod is a circular cylinder having  
4        a circumference, and  
5        along the length of the rotatable acrylic rod, the  
6        reflective strip encompasses ninety degrees of the  
7        circumference a diameter of a circular cylindrical cross-  
8        section of the rotatable acrylic rod.

1        42. (Currently Amended) The light of claim 31 [[41]],  
2        wherein  
3        the rotatable acrylic rod is a circular cylinder having  
4        a circumference, and  
5        along the length of the rotatable acrylic rod, the  
6        reflective strip encompasses forty five degrees of the  
7        circumference a diameter of a circular cylindrical cross-  
8        section of the rotatable acrylic rod.

1        43. (Currently Amended) The light of claim 31, wherein

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2 the photons are coupled into the rotatable acrylic rod  
3 and ~~radiated~~ reflected outward therefrom without the use of  
4 a fragile glass bulb or filament.

1 44. (Previously Presented) The light of claim 31,  
2 further comprising:  
3 an electrical-to-optical controller coupled to the  
4 first circuit board to control the one or more light  
5 emitting diodes (LEDs); and  
6 an on/off switch to switch the generation of  
7 photons by the one or more light emitting diodes (LEDs)  
8 on and off.

1 45. (Previously Presented) The light of claim 44,  
2 further comprising:  
3 an intensity selection switch to vary the  
4 brightness of the generated light.

1 46. (Currently Amended) The light of claim 45, wherein  
2 ~~further comprising:~~  
3 the one or more light emitting diodes (LEDs) of  
4 the first and second circuit boards are a plurality of  
5 light emitting diodes (LEDs) each to generate a  
6 different color of light, and  
7 the light further includes  
8 a color selection switch to selectively choose a  
9 mixture of primary colors generated by the ~~one or more~~  
10 plurality of light emitting diodes (LEDs) to vary the  
11 color of the generated light.

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1           47. (Previously Presented)       The light of claim 31,  
2 further comprising:

3                 a transformer to transform AC power to a safe  
4       efficient power to power the one or more light emitting  
5       diodes (LEDs) of the first and second circuit boards in  
6       an efficient manner.

1           48. (Cancelled)       The light of claim 1, wherein  
2       the length of the rotatable acrylic rod is proportional  
3       to a desired frequency of light.

1           49. (Cancelled)       The light of claim 1, wherein  
2       the diameter of the rotatable acrylic rod is  
3       proportional to a desired frequency of light.

1           50. (Cancelled)       The light of claim 31, wherein  
2       a length of the rotatable acrylic rod is proportional  
3       to a desired frequency of light.

1           51. (Cancelled)       The light of claim 31, wherein  
2       a diameter of the rotatable acrylic rod is proportional  
3       to a desired frequency of light.

1           52. (New)           The light of claim 7, further  
2 comprising:  
3                 a second circuit board including one or more light  
4       emitting diodes (LEDs) to generate photons, each of the

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5 one or more light emitting diodes (LEDs) having an  
6 optical axis; and  
7 a second end housing having a second opening  
8 through which the second end of the acrylic rod is  
9 inserted, the second end housing to house the second  
10 circuit board and align the one or more light emitting  
11 diodes (LEDs) of the second circuit board with the  
12 second opening and the second end of the acrylic rod  
13 such that the optical axis of each of the one or more  
14 light emitting diodes (LEDs) of the second circuit  
15 board is substantially in parallel with the central  
16 optical axis of the acrylic rod.

1 53. (New) The light of claim 8, further  
2 comprising:  
3 a second circuit board including one or more light  
4 emitting diodes (LEDs) to generate photons, each of the  
5 one or more light emitting diodes (LEDs) having an  
6 optical axis; and  
7 a second end housing having a second opening  
8 through which the second end of the acrylic rod is  
9 inserted, the second end housing to house the second  
10 circuit board and align the one or more light emitting  
11 diodes (LEDs) of the second circuit board with the  
12 second opening and the second end of the acrylic rod  
13 such that the optical axis of each of the one or more  
14 light emitting diodes (LEDs) of the second circuit  
15 board is substantially in parallel with the central  
16 optical axis of the acrylic rod.



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1           54. (New)           The light of claim 17, wherein  
2                   each of the one or more light emitting diodes  
3           (LEDs) are a multi-color light emitting diode to  
4           generate various colors of light, and  
5                   the light further includes  
6                   a color selection switch to selectively choose a  
7           mixture of primary colors generated by the one or more  
8           light emitting diodes (LEDs) to vary the color of the  
9           generated light.

1           55. (New)           The method of claim 21, wherein  
2           the first photons are reflected out of the rotatable  
3   acrylic rod by a reflective strip coupled to the rotatable  
4   acrylic rod along a substantial length thereof.

1           56. (New)           The method of claim 22, wherein  
2           the first photons and the second photons are reflected  
3   out of the rotatable acrylic rod by a reflective strip  
4   coupled to the rotatable acrylic rod along a substantial  
5   length thereof.

1           57. (New)           The method of claim 21, wherein  
2           the first photons are generated by at least one light  
3   emitting diode (LED).

1           58. (New)           The method of claim 22, wherein  
2           the first photons and the second photons are each  
3   generated by at least one light emitting diode (LED).

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1           59. (New)           The method of claim 21, wherein  
2           the first desired color differs from white.

1           60. (New)           The method of claim 22, wherein  
2           the first desired color differs from white.

1           61. (New)           The method of claim 22, wherein  
2           prior to generating the first photons and the second  
3           photons, the method further includes  
4           rotatably mounting the rotatable acrylic rod to an  
5           equipment rack to provide equipment lighting.

1           62. (New)           The light of claim 31, wherein  
2           the light is a rack light mounted to an equipment rack  
3           to provide equipment lighting.

1           63. (New)           The light of claim 45, wherein  
2           each of the one or more light emitting diodes  
3           (LEDs) of the first and second circuit boards are a  
4           multi-color light emitting diode to generate various  
5           colors of light, and  
6           the light further includes  
7           a color selection switch to selectively choose a  
8           mixture of primary colors generated by the one or more  
9           light emitting diodes (LEDs) to vary the color of the  
10          generated light.